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● MEMOIR of JACOB PERKINS ●
(1766-1849)

A Die Sinker for the
Massachusetts Copper Coinage



Portrait from
Appleton's Dictionary of Machines, Mechanics,
Engine-work and Engineering
2 volumes (New York, 1867)

Sequential page 1001

***** GLEANINGS *****

from THE FAMILY MAGAZINE January 1835

MEMOIR of JACOB PERKINS

by Samuel L. Knapp

● ● submitted by Peter Boisvert; Everett, MA

(G-5)

"Time proves all things"

This biography of Jacob Perkins was located by CNL Patron Peter Boisvert and sent to us for review. It was included in a bound book of issues for the years 1835 & 1836 of the **Family Magazine** published by Redfield & Lindsay, No. 13 Chambers Street, New York. Published during the lifetime of Perkins, it is the earliest Perkins biography of which we are presently aware and contains details of his early life unavailable from any other known source.

The biography contains accounts of Perkins' early life, education - or lack thereof - and later business experiences. It relates how Perkins at age 21, according to a first hand report of Ebenezer Hancock, succeeded where others had failed in producing satisfactory dies for the Massachusetts copper coinage. Like so many of the other die sinkers of the early American coinages, Perkins was another of those "ingenious mechanics" whose technical talents helped to build the industrial base of the new Nation, but - just like the others, seemed to lack the business skills and good fortune necessary to convert that talent into personal wealth and suffered a number of financial catastrophies during his career, both in America and England. As a person, however, he seems to have succeeded admirably as "one whose track to glory was bloodless, and whose elevation never gave the human heart a pang, nor drew from mortal eye a tear".

We have reproduced this biography in its entirety for the benefit of our Patrons. The line drawing of Perkins which accompanies the article is by an unidentified artist and was undoubtedly intended to reflect a pensive pose but appears, instead, to more accurately reflect the effects of a long and tiring day. As to the identity of the author Samuel L. Knapp we have no clue but his first hand association with mint master (sic) Ebenezer Hancock lends credibility to the status of Perkins as die sinker for the Massachusetts copper coinage and throws some doubt on the established numismatic tradition that Joseph Callender produced the majority of the dies but was replaced by Perkins only because he worked for more reasonable pay.

Ebenezer Hancock was not mint master but was instead Inspector of the Mint; Capt. Josuha Wetherle served as mint master (or Master of the Mint, his official title which appears to be used interchangeably with Master Workman of the mint in the documentation of the Massachusetts Council). Surprisingly this same error is repeated by the Bathes whose authoritative work is mentioned below. *(A)* We might suspect that they copied the error from our **Family Magazine** biography, but there is no evidence that they were aware of it; in fact, the evidence is that they were not aware of it since they neglect all the information on the early life of Perkins. The **Family Magazine** biography is the only one presenting any substantive detail of events in Jacobs' childhood!

A careful reading of the report of January 22nd, 1788 submitted to the Massachusetts Council by Josuah Witherle (Crosby page 257, lines 6-13) and his subsequent report of June 17, 1788 (Crosby page 258, final paragraph) seems to substantiate the statement attributed to Hancock that Callender was replaced by Perkins primarily because of the quality of his workmanship which resulted not only in suitable dies (which implies that Callender's dies were not satisfactory) but at a reasonable cost as well. From a technical point of view this is a totally different circumstance than that held today by numismatic tradition and suggests that without the skills of Jacob Perkins the minting of copper coins by Massachusetts might well have failed completely! (ye Editor suspects that Callender may have been unable to properly harden his dies and that Perkins accomplished this for the mint in addition to the later production of complete dies). Current thinking that Perkins produced very few dies is based on the payments that he received which may be extremely misleading since Perkins was to be paid a percentage (1%) of the value of coins struck from his dies. These coins were struck at a time (during 1788 and the first three weeks of January 1789) that they were, in fact, illegal under terms of the new Federal Constitution. This fact, of which the Massachusetts Council was fully aware caused them to hurriedly coin the stock of suitable copper immediately at hand and then shut down the mint. As a consequence of this situation Perkins may have been considerably underpaid and some of his dies may have produced negligible coinage or perhaps none at all! *(B)* We shall show later that Perkins dies produced approximately one-third of the total number of Massachusetts copper coins.

The traditional categorization of which dies were made by which man are based entirely on a single "clue" noted by S. S. Crosby (Crosby, pages 251 & 252) regarding the "closed S" design of the legend letterpunches. Crosby shows that this clue correlates almost perfectly with the number of dies (39) believed at that time to have been manufactured by Callender. The Rarity Table by CNL Patron Michael Packard on page 1013 of this issue indicates that as many as 18 Perkins dies may have been in use; accordingly, we can assume that

Perkins manufactured one-third of the total dies and Callender manufactured two-thirds. [Today's totals of dies are Callender 37, Perkins 18, and 8 are contemporaneous counterfeits]. A quick inspection of this table shows that Callender manufactured all of the 1787 varieties of cents and half cents, and that Perkins manufactured all of the 1788 half cent dies and one-half of the 1788 cent dies. A closer inspection of the 1788 cent die-varieties shows that the Perkins die-varieties are relatively low rarity values and the Callender somewhat higher; this leads to the conclusion that a slight majority of the extant 1788 cents are from dies by Perkins. A comparison of the overall rarity values presented by Packard results in a surprising conclusion. Of some 400,000 total copper coins produced by the Massachusetts mint, approximately one-third were from Perkins dies and two-thirds from Callender dies! It is clear that Perkins' contribution to the Massachusetts copper coinage was substantial. The rationale for these figures is given in the accompanying paper by the Editor "A QUANTITY ANALYSIS of Massachusetts Cents and Half Cents" which describes the methodology for generating these numbers from the rarity tables developed by Packard.

The records of payments to Perkins recorded by Crosby indicate a total of £3-18-10; another record listed by the Bathes indicates "19 shillings for die sinking -- September 30, 1788" *(C)* suggests that at least some of Perkins payments were NOT based on a percentage. In fact, nothing reported by Crosby indicates that the Perkins payments were actually on a percentage basis. All of this suggests an interesting area for future research involving a search of the original records to establish, if possible, the exact basis for the payments to Perkins and possible correlation with known production records. The summary of accounts presented by Crosby (Crosby, p.269) and the transcripts of official records preceding it indicate with certainty that no 1787 dated coins were actually struck in that year, and that the total production of £1048-2-7 was struck between July 31, 1788 and January 21, 1789.

Today, the standard work on Perkins is by Greville Bathe and Dorothy Bathe, "Jacob Perkins" (Philadelphia: Historical Society of Pennsylvania, 1943), and is a magnificent compilation of substantive data and includes many sketches and illustrations. Unknown, however, to the Bathes was yet another series of personal remembrances which included Jacob Perkins as well as many other Philadelphia area individuals associated with early American technology and by direct association, the first United States Mint. *(D)* These are the "Early Engineering Reminiscences (1815-40) of George Esol Sellers" originally published in the **American Machinist** magazine between the years 1884 and 1893. These articles were collected and edited in 1965 by Eugene S. Ferguson and published by the Smithsonian Institution, Washington D.C. In his preface, editor Ferguson comments "The reader can hardly fail to find new insights, previously unrecognized new relationships amongst people and events, and

occasionally -- as when ebullient Jacob Perkins or sagacious Bryan Donkin step out of the page to confront the reader -- sheer delight". This book is **MUST** reading for anyone with even the slightest interest in early American machinery or the first United States Mint; however, the serious researcher should return to the original texts published in **American Machinist** to avoid omissions which have resulted from the extensive editing of Ferguson. *(E)*

Sellers reports many extraordinary technical adventures in which Perkins was engaged during his short time in Philadelphia, some involving argument and eventual challenge, wagers and impromptu demonstration of results using makeshift mechanisms, such as a waterpump constructed from an old boot. Sellers says that Perkins favorite expression on the conclusion of any argument was "Well, we shall see; time proves all things." Perkins went on to considerable technical glory in England (where he died in 1849) based chiefly on his experiments regarding the compressibility of water *(F)*, his exceptional skill in working steel, and on his high pressure steam engine designs and production; the original and basic design which, according to Sellers, was the invention of "Old Blind Hawkins" of Philadelphia whom Sellers describes with considerable skill. Lacking this information, the Bathes were unable to complete the history of Hawkins' involvement in Perkins' British steam engine patents.

Jacob Perkins' phenomenal career began and ended with activities which are of special interest to present day collectors. The first, of course, was the Massachusetts Copper Coinage and the last was the production of the famous 1840 "Penny Black" British Postage Stamp printed from steel plates made by his process and printed by his son's firm in London. Between these episodes, both of which were minor happenings during Perkins outstanding career, were several others of particular interest to numismatists:

- (a) Development of a coinage press of modern punch press style with rotating inertial wheel, which simultaneously cut planchets and stamped the design, and an edge lettering machine (circa 1792).
- (b) Applied unsuccessfully for a position with the First United States Mint. (1792) *(G)*
- (c) Pattern silver dollar (1793) of Washington, military bust left. *(H)*
- (d) Invention of the steel "stereotype check plate" for the manufacture of printing plates for banknotes. (1799).
- (e) Dies for funeral medals of Washington. (Baker 165 - 169). Ye Editor considers it very likely that Perkins also struck these specimens. (circa 1800).
- (f) Invention of a Transfer Press for transferring engravings from flat plates to steel roller dies. (1813).
- (g) Printing Press for Copper and Steel Engraving. (1813).
- (h) Invention of the progressive seal lever press (a toggle joint press with dies) for embossing seals on documents. (1819).
- (i) Ornamental Turning & Engraving Lathe; Construction of Plates & Presses; Making and using Dies and Presses for Coining and Stamping Metal. (1819). *(I)*

Items (f), (g), (h) & (i), above, were all concerned in one way or another with the production of "counterfeit proof" printing plates for the printing of banknotes and U. S. Currency, as well as other printing applications.

Of Perkins' many other inventions perhaps the most important to us today was his development of the compressor for mechanical refrigeration. A summary of Perkins' patents is presented in the endnotes. *(J)*

In order to give a sense of numismatic completeness to this brief report on Perkins we are pleased to include in this issue an up-to-date tabulation of Massachusetts Cent and Half Cent die varieties with rarity values prepared by CNL Patron Michael Packard of Fairfax, VA. In addition to tabulating the known die variety combinations, Mike has included his current estimates of rarity and indicates those combinations believed to be struck from the dies of Jacob Perkins or Joseph Callender. For the best current illustrations of these die varieties we recommend the continuous tone glossy photograph version of the Bowers & Merena, Inc. public auction catalog of The Frederick B. Taylor Collection (March 26-28, 1987 -- New York City) which contains beautiful illustrations of the majority of the die varieties. *(K)*

The **Family Magazine** biography closes with a footnote of no numismatic consequence whatsoever, but nevertheless is intriguing because it tacitly emphasizes what might have been accomplished at the First United States Mint had Jacob Perkins been employed there and applied his knowledge of steam power, as he had proposed, to the mint operations. Perkins' steam gun is described in numerous newspaper and magazine articles of the time and must have truly been an awesome machine. The United States Mint did not get around to steam power for many years; coinage presses driven by steam power started operation in 1836. Earlier, after the fire of January 1816, a steam engine was installed with the replacement machinery but only for the purpose of driving roller and drawing machines; they were not used to drive coinage presses or upsetting (milling) machines. *(L)*

We hope that this capsule summary of the life and accomplishments of Jacob Perkins will be of interest to our Patrons. Perkins is almost a forgotten man of early American history and this summary will perhaps bring his magnificent accomplishments to the attention of a new generation of numismatists. As is always the case, comments from our Patrons are requested and are sincerely appreciated by ye Editor. Perhaps one of our Patrons can now dig up some comprehensive data regarding Joseph Callender so that we can give him "equal time" in the pages of CNL. Crosby says of Callender, in a footnote, "The [Boston] Directory of 1789 says, 'Callender, Joseph, engraver, Half-square, State-street.'"

BIOGRAPHY.



MEMOIR OF JACOB PERKINS.

BY SAMUEL L. KNAPP.

Jacob Perkins was born at Newburyport, on the ninth day of July, 1766. His father was Mr. Matthew Perkins, a descendant, in the third generation, of one of the first settlers of Ipswich, which is one of the oldest towns in Massachusetts, and has, ever since its settlement, been remarkable for the longevity of many of its inhabitants. This gentleman died many years since, nearly ninety years of age. He retained his mental and corporeal faculties in a wonderful degree, until the last days of his life. He was a man of a strong mind; an industrious, good citizen, and a careful father, but brought up his children in the strict school of Presbyterian discipline. Jacob early discovered marks of an inquisitive mind; for before he had learned his letters, he chanced to get into his possession a large watch, which he opened with great care, and for a long time listened to ascertain what made the noise in it

His mother found him with it, and hastily took it from him, thinking he must have done it some injury; but the child earnestly requested her to let him have it again, when he was a bigger boy, that he might see what made the noise. As soon as he could read words of three syllables, he was sent to the publick school, and was kept there until he was twelve years old. The schoolfellows of Perkins speak of him as a smart boy at that time, who was fair in all play, yet he was sure to be among the first in every game in which children amuse themselves. At twelve years of age he was sent as an apprentice to a Mr. Davis, of Newburyport, a goldsmith, to learn the art and mysteries of the trade. This was considered the best situation for the development of the lad's talents for the mechanical arts. His opportunities for acquiring information were, however, small, and these advantages, such as they were, did not continue long, for Davis died when Perkins had only served out three years of his apprenticeship.

This was a trying period for him, then a youth of fifteen years of age, panting for knowledge, and desirous of reaching the metropolis to find instruction in his profession; but he made up his mind to carry on the business of the shop, and this determination he religiously fulfilled; and the establishment, during the remaining years of his apprenticeship, was more lucrative than it was in the life time of his master. Gold beads were then worn on the neck of every class of respectable females, from the aged dame with Bible and spectacles, to the laughing and buoyant damsel of fifteen; of course there was an extensive market for this article; the workmanship of his beads was of the highest order; the honesty of so kind and faithful a young man was never questioned, nor could be, and the shop was the resort of all who wanted to purchase. This was a fortunate commencement; for people of every grade, from king Hiero, to the simplest maiden, whose industry had just reached the happiness of seeing a string of pure and shining gold upon her spotless bosom, dislike to be duped in matters of ornament, more particularly, perhaps, than in any other. Shoebuckles were then universally worn by all ages and classes, and Perkins turned his attention to the manufactory of them, and soon discovered a method of plating them, entirely new, by which he could bring his work into the market at less prices than the imported ones of equal goodness and beauty could be afforded.

But the fashion of this ornament soon passed away, and so entirely, that for the last thirty years scarcely a pair of buckles has been seen, and then only when worn by some pertinacious adherent to antiquated dress.

During the old confederation, each state had a right to coin money for itself; Massachusetts had a mint, from which was issued copper coin only, stamped with the arms of the commonwealth. The art of making dies for this coinage was then, with us, in its infancy; and it was with great difficulty that a mechanick could be found, of sufficient skill, to undertake the task. After numerous failures of others, Perkins was employed by government, when he was but twenty-one years of age, and succeeded to the satisfaction of the master of the mint, the late Ebenezer Hancock, Esq., from whom the writer had

this information. At twenty-four he invented the nail machine, which cut and headed nails at one operation.

This was the best labour-saving machine that had ever been in use among us. Those, at first doubtful of its success, were at length convinced of the great utility of this invention; and it was generally considered as the sure foundation of the inventor's fortune and fame. Great offers were made him for a share of the patent. This was, indeed, a wonderful machine; such celerity of motion, such power of execution, such a combination of mechanical principles, had rarely, or never, been seen in this country. Those who foretold the success of the invention were right—time has proved it; but those who thought that great advantages would result from it, to the inventor, forgot that knaves might reap what industry sowed, and bargain-making men enjoy what genius had created. At this time, two unprincipled adventurers from abroad, with the appearance of great wealth, engaged with Perkins in erecting a factory for putting the machine in operation on a large scale. The works were auspiciously commenced, and continued to answer the expectations of the publick for a year or two, and were becoming more perfect every day, under the superintendence of Perkins; when it was discovered by him that his copartners had but little money, and less honesty, and that their credit was lost. The establishment was sold by them, and Perkins was suddenly left with the loss of all his hard labours, and the property he had put in the concern. This was not all; they left debts for which he was answerable, without any means for their payment. This disaster plunged him into the most extraordinary and vexatious embarrassments. By the assistance of his friends, however, Perkins soon overcame these difficulties and started with fresh vigour to apply his mind in his profession, and was successful in almost every thing he undertook, so far as to show that he seldom pursued an inquiry without some beneficial result to the publick. A set of liberal men had purchased the factory he and his copartners had abandoned, who employed him to put the factory in operation, and to add some improvements to the old works. This did much to amuse him, until he found other business, and they knew and acknowledged, in a proper manner, the value of his services.

The evil of counterfeit bank notes, in the market, was severely felt by all classes of people. The ingenuity of Perkins was called into requisition to avert in some degree this sore vexation and calamity. Nothing could be more difficult than to stop the practice of counterfeiting by detecting the authors of it; they flee from one place to another at a great distance from each other, with such security in a thinly-settled country, and find so many facilities in getting off spurious bills, that the race can never be extirpated by the terrors of the law, nor the vigilance of the police; something, therefore, was to be done, which would give the most ignorant in the community some guide by which he might determine, in some cases, the spurious from true bills.

This was a progressive labour. The experiment was first made by a small stamp on the common bills; this answered a very good purpose, for the stamp was seldom imitated. Afterwards, the check plate was used, which was one of the best preven-

tive of deception that we ever had. Even the race of counterfeiters never tried to imitate this plan, or never, with the slightest success: and in their flash language to one another, they bear testimony to its excellence, by often saying, that they had such a sum of money in *bank bills*, and so much in *check backs*; or sometimes, *striped backs*—giving their associates to understand by these latter terms, how much good and genuine paper they had in their possession; and many of them, when detected and condemned, and could have no farther interest in the prosperity of the trade, have declared the fact, that they could do nothing with these plates. The public prosecutors have uniformly stated, that they never had made an indictment on an imitation of this plate. The bills were rather thick and clumsy, and of course, not of easy management in the banks; and others of a thinner sort were preferred. Many banks adopted the plate from the belief of the security in it.

A self-taught man, in his progress to knowledge, has a thousand difficulties to contend with, that the regularly educated man does not meet. Instead of having rules, principles, and axioms, stored in his memory for use, he has to form, as it were, his own alphabet of the sciences and the arts he is striving to understand. The elementary principles which have been discovered and fixed for ages, are but little known to him. He becomes the true inventor of many things, when, perhaps, the original inventor lived ages before him, and may have been forgotten. Much time is therefore spent in toiling up to the knowledge of his own time. This exertion may strengthen the powers of his mind, but it certainly consumes some of the best years of human life; and after all, he has, probably, imbibed numerous errors in philosophy, which have been detected, and their fallacy proved to the learned and scientifick, long before he existed. Perkins deeply felt this want of early instruction; he knew there must have been many things settled which he was trying to discover, but he did not know where to find them. A man of genius without the light of knowledge, resembles Samson when his vision was extinguished, but his hair had grown, groping, in vain, for objects on which his supernatural gift might be tried. When Perkins was young, there were but few good books on natural philosophy in this country, and those, perhaps, not within his reach. Lectures were given at the several colleges, but they did not contain much information, compared with those of the present day, and these were chiefly confined to professors and students. The exact sciences were but slightly regarded at that period by many men of learning. The taste has changed, and there is a strong desire for this kind of knowledge in almost every profession; and, in truth, philosophy has been brought to the common cares of life, with wonderful success.

The growth and progress of a great mind, depend much on the place where a man's lot is cast in early life, and the rank he holds among his fellow men. The birthplace of Perkins was, in many respects, friendly to a mind like his. Retirement is the nurse of thought; he had, in that place, sufficient opportunities for deep and uninterrupted reflection. It was a busy, thriving town, with a population of six or seven thousand souls. The people, in general,

were very intelligent; and some of them, especially in the professions, men of much erudition. The mass of the inhabitants were sober, honest, and religious, industriously engaged in their own pursuits; they never disturbed him by vague and unnecessary inquiries about his discoveries, but waited until he was ready to communicate them. He was in this place equally removed from the excitement and idle curiosity of a great city, and the peering inquisitiveness of a small village. Among these relations, friends, and townsmen, if he had not much to fire his ambition, he had nothing—after his first embarrassments were removed—to disturb the current of his thoughts; nothing to crush his hopes, or to mortify his spirits. He was known to all, connected with many, respected by most, and associated with the best; from boyhood he maintained, and augmented the favourable impressions he had made on the public mind for talents, and his name was as familiar to every child, for superiour ingenuity, as the dial which the urchin watched to mark the moment for his school to begin. The literati of the town were among his warmest admirers and friends, and if he did not get much information from them in his own pursuits, he received many other advantages of perhaps equal value; they were the guardians of his fame; their opinions and friendships were a shield to his reputation, when assailed by the envious and carping, among those engaged in similar pursuits.

The latter years of the residence of Perkins in Newburyport and Boston, were occupied on subjects so numerous and various, that it would be impossible, for any one, but himself, to give an accurate detail of them, or hardly make out a full catalogue of his inventions and improvements. The method he discovered of softening and hardening steel, at pleasure, increased the interest the community had taken in his check-plate for security against counterfeiting. This discovery has produced many fortunate results, and opened a great field for his labours. The softness of copperplates, which required often retouching, precluded the possibility, by these means, of producing a perpetual similarity in dies for bills, or other use; but this invention has effected the object practically, if not mathematically.

The king of Siam never expressed greater surprise and incredulity, when told by the Dutch ambassador, that in Holland water became so hard, at times, as to be sufficiently strong to bear all his royal elephants, than did the philosophers of Europe and America, when Perkins first maintained the doctrine of the compressibility of water. He for a long while doubted the old philosophy, but made a series of experiments, before he dared risk his reputation on a full avowal. His perseverance is now amply rewarded by a general belief in this phenomenon. This discovery led to the invention of his bathometer, an instrument, as its name denotes, to measure the depth of water—and his pleometer, which marks with precision the rate at which a vessel moves through the same element.

Every man, who knows Perkins, and is capable of judging of his merits, cannot but place his intellectual powers in the first class of mind, but common observers have frequently thought him dull and plodding—a man who built up his fame by slow and patient drudgery; but they do not know him. It is

true he is patient and laborious, but it is also true that he possesses that divine *impulse* of the mind which cannot be measured, nor exactly analyzed; that *power* which creates, combines, and felicitously arranges all it acts upon; that *faculty* of the soul which leaves all things of a common cast and seems to go on as if ordained to develop the great laws of creation. There was much of the "*mens divini*" in him who first used the alembick, or invented numbers and pursued them to the higher branches of mathematicks, or taught the extent, and the charms of algebraick calculation, as in those who have produced the sublimest efforts of taste, in poetry, sculpture, and painting. The ethereal spirit which lighted up the soul of Archimedes was as intense, as pure and hallowed, and came as directly from the great fountain of light and intelligence, as that which warmed the breast of Homer. The poets, painters, sculptors, and orators, are not the only sons of God by the daughters of men: the philosophers and inventors—that have made

“————— fire, flood, and earth,
The vassals of their will,”

for the benefit of mankind, have an equal birth claim in the heraldry of nature.

Simplicity is the striking characteristic of the habits and manners of Perkins; and his methods of reasoning are all of the same cast; he begins upon a subject, whatever it may be, with calmness and serenity, and though constantly “on the rack of invention,” he seems in a reverie, on a bed of flowers. Invincibly persevering until he is certain that he can accomplish what he has undertaken, he often leaves the design to be carried into execution by some one to whom he accidentally imparts the information, and, probably, the first he knows of the advantage of his invention is through the medium of the altered condition, and perhaps consequential airs of the creature who had grown up by catching the offals of his genius. Smaller animals often feed on the prey the lion has hunted down.

To his brother artists, Perkins always showed the most delicate attention; and, notwithstanding he was teased by them, to examine and recommend their inventions, as often, and as pertinaciously as the bard of Twickenham, by his rhyming brothers, yet he never lost his patience, or ordered the door to be shut, the knocker tied up, nor charged his workmen to say that he was sick or dead; he felt no jealousy of them, and would do much at any time to oblige them, if they were tolerably clever in their business. He was modest and quiet, but did not think humbly of his own capacity; not that he ever assumed a tone of superiority, or discovered any self-conceit, but he always indulged ardent hopes, and it would not be going too far to say, a fixed belief, that he should find something in his course which would lead to fame and fortune. When entreated by his friends, as he often was, to control his disposition for invention, and attempt to turn some of his numerous matters, already in operation, to pecuniary account, he quietly answered, that he was, in his own opinion, still an apprentice in his profession, and must do something more before he should be satisfied to set up for himself; and he sometimes modestly intimated hopes that England would be the theatre on which he should act his part.

There never lived a man more destitute of selfishness, or more prodigal of his labours for public good; but it generally happens that, in views and feelings too expanded, a very particular attention to ordinary and everyday matters is not readily found; Perkins wanted such a man as Franklin was, for his friend and companion, with his maxims on prudence, thriftiness, punctuality in pecuniary settlements, and all the economical philosophy of "Poor Richard;" and such a sage might in return, have been paid for his friendship, by purity of feeling, singleness of heart, and an exhaustless fund of intellectual wealth.

Perkins never made any complaint of the neglect of the world, or its ingratitude, which is so common to men who are sometimes not sufficiently appreciated. In every strait and difficulty he found one friend that was never weary—such a one as is seldom seen or known—one who never obtruded his advice, never sought him to share his fame, or followed him to mingle with his associates for pleasure or pride, nor kept near him to speculate on his credulous generosity—but a man of good affections and an excellent understanding, who came when the funds of his friend were low, and his pulse sinking with disappointment, to lend his name to the bank and relieve his mind from the load which oppressed him; all this was done with such delicacy and gentleness as greatly to enhance the value of the service, and to give new charms to the fraternal tie—for this was a younger brother; and the vicissitudes of fortune have given the elder an opportunity of showing a similar disposition. For several years before Perkins went to England, he had resided in Philadelphia, a city in which the arts, sciences, and letters were highly patronized.

Mr. Perkins has now been several years in England. At the commencement of his career, he was hailed by all classes with enthusiasm; he was encouraged to go on, and has, we trust, received honour and reward from a people who have given him a fair opportunity to exhibit his powers; the British nation have been just to his merits, without asking how long it is since his ancestors left their shores. Perkins has no political account to settle with any body of men, for he always considered himself as a citizen of the world. Science was his pursuit, usefulness his object; and although he enjoyed his own opinions and exercised his rights, yet he never stopped to join a party or to warm himself by political excitements.

Since Perkins has been in England, his fame and usefulness have greatly increased; still, however, disappointments and vexations, the everlasting concomitants of genius, have fallen to his lot. The public are now in possession of a sufficient number of his inventions, which have been practically tested, to ensure him a permanent reputation; but he is not content with what he has already done, for every hour bears witness to some new struggle by him, in the world of invention, and the last is more significant than any former one.

He has a compact, athletic frame, a strong constitution, and sprang from a long-lived race of hardy men; therefore we may indulge a hope that he will have opportunities of doing much before he passes the boundaries of active life. May it be so decreed—and the remotest nations enjoy the benefit of

the labour of one whose track to glory was bloodless, and whose elevation never gave the human heart a pang, nor drew from mortal eye a tear.

NOTE.—Mr. Perkins had a safety steam-engine manufactory near the Regent's Park, London. It is doubtless well known that about ten years since, he invented that wonderful specimen of human ingenuity and destructive power the steam gun. This extraordinary invention at once attracted the attention of the first men in England, and a committee of engineer and artillery officers was appointed by the Duke of Wellington to examine it. Mr. Perkins was accordingly visited by that committee, accompanied by his grace the Duke, the Master General of the Ordnance and his staff; the Marquis of Salisbury, Mr. Peel, Sir H. Hardinge, Lord Fitzroy Somerset, the Judge Advocate General, and many military officers of the highest rank. Mr. Perkins's experiments excited amazement and admiration in every witness. "At first," says an English paper, "the balls were discharged at short intervals, in imitation of artillery firing, against an iron target, at the distance of thirty-five yards. Such was the force with which they were driven, that they were completely shattered to atoms. In the next experiment the balls were discharged at a frame of wood, and they actually passed through eleven one-inch planks of the hardest deal, placed at the distance of an inch from each other. Afterwards they were propelled against an iron plate one fourth of an inch thick, and at the very first trial the ball passed through it. On all hands this was declared to be the utmost effort of force that gunpowder could exert. Indeed, we understand that this plate had been brought specially from Woolwich for the purpose of ascertaining the comparative force of steam and gunpowder. The pressure of steam employed to effect this wonderful force, we learnt, on inquiry, did not at first exceed 65 atmospheres, or 900 lbs. to the square inch; and it was repeatedly stated by Mr. Perkins, that the pressure might be carried even 200 atmospheres with perfect safety. Mr. Perkins then proceeded to demonstrate the rapidity with which musket balls might be projected by its agency. To effect this, he screwed on the gun-barrel a tube filled with balls, which, falling down by their own gravity into the barrel, were projected one by one, with such extraordinary velocity, as to demonstrate that, by means of a succession of tubes, filled with balls, fixed in a wheel, (a model of which was exhibited,) nearly one thousand balls per minute might be discharged. In subsequent discharges or volleys, the barrel, to which is attached a moveable joint, was given a lateral direction, and the balls perforated a plank nearly twelve feet in length. Thus, if opposed to a regiment in line, the steam gun might be made to act from one of its extremities to the other. A similar plank was afterwards placed in a perpendicular position, and in like manner, there was a stream of shot-holes from the top to the bottom. It is thus proved, that the steam gun has not only the force of gunpowder, but also admits of any direction being given to it. But what seemed to create most surprise was the effect of a volley of balls discharged against the brick wall by the side of the target. They absolutely dug a hole of considerable dimensions in the wall, and penetrated almost one half through its thickness. We heard several officers declare their belief, that had the balls been made of iron instead of lead, they would actually have made a breach through it—the wall was eighteen inches thick."

Perkins is still in England, and his industrious ingenuity is still employed in multiplying useful inventions and improvements in the mechanic arts.

● ENDNOTES -- MEMOIR of JACOB PERKINS ●

- *(A)* Despite the careful and far-reaching technological and historical research data presented by the Bathes, their work contains several questionable numismatic statements. Another, in addition to Hancock's position at the mint, is that the "first design [for the Massachusetts Cent] had on one side thirteen circles .. and etc" and relate thereafter the exact design for the Fugio Cents of 1787! They certainly did not get this idea from Crosby whom they reference; we mention it here because it highlights one of the unexplained mysteries of mid-1800's cataloging by various dealers who referred to the Fugios as "Massachusetts Cents" in their publications. In footnote #247 to his manuscript "James Jarvis and the Fugio Coppers", Damon G. Douglas comments "Eckfeldt and DuBois may have been the source for the designation 'Massachusetts Cents' occasionally applied to Fugios by catalogers prior to 1860 ...". The identification of Hancock as mint master and the identification of the Fugio design with the Massachusetts Cents are both, evidently, from sources used by the Bathes that cannot now be identified with certainty.
- *(B)* If any one fact can be termed as "clearly evident" from the details gleaned from the inventions and experiences in the career of Jacob Perkins it is that he was an undisputed master in the working and hardening of iron and steel! The Massachusetts Cents and Half Cents are by far the most expertly produced of all the early American coinages, both in die work and coinage quality aspects, and these qualities stand today as evidence of superb craftsmanship throughout their manufacture. It is difficult not to attribute a considerable portion of this excellence to Perkins.
- *(C)* Massachusetts Mint records in the Taylor Collection of the American Antiquarian Society.
- *(D)* Copies of both "Bathe" and "Sellers" are difficult to locate today; however, they can be readily obtained for short periods of time from any public library utilizing the nationwide Interlibrary Loan Service.
- *(E)* Copies of the early issues of **American Machinist** are almost impossible to locate in any library. Patrons interested in the episodes relating to the First United States Mint can obtain a complete typescript of those episodes which was prepared in 1948 by Raymond H. Williamson from the library of the American Numismatic Association, call number GA 80; S4. It also has available a copy of "Ferguson" [Sellers' reminiscences]; call number GA 80; F4.
- *(F)* Perkins' experiments on the compressibility of water, circa 1819, achieved pressures in the order of 30,000 pounds per square inch. This was no small feat at a time when pressures of only a few pounds per square inch resulted in many boiler explosions with damage and injury of such magnitude that public outcry and protest demonstrations against steam power occurred that must have rivaled those of modern times against atomic power plants. His pressure vessel for the experiments consisted of a modified twelve-pounder cannon mounted vertically and having a small force pump operated by a hand lever mounted on a cap screwed into the muzzle. (Bathe, p. 74 & Plate XVI). A similar technique is still in use today in some research facilities where extremely high pressure gasses are stored in pressure cylinders fabricated from surplus Naval guns.

- *(G)* Perkins' application in July 1792 for an appointment to a position at the First United States Mint in Philadelphia was not rejected because of any lack of credentials, but simply because it was too late in presentation; evidently mint director David Rittenhouse had by then completed staffing of the Mint and there were no vacancies left to be filled. Newspaper articles of the period incorrectly reported that Perkins had been "sent for to Philadelphia, for the purpose of superintending the coinage there". (Bathe, p.11-12).
- *(H)* Exactly which one of the Washington Bust Left specimens this might be is uncertain. The Bathe state "The best known of his [Perkins] work was a pattern silver dollar which he made in 1793, which shows a bust of Washington in military uniform facing left and around the field is some very fine engine work of intricate pattern". In a footnote (on page 8) they identify this specimen with one described by Matthew Stickney in Volume 3, Number 5, 1868, of the **American Journal of Numismatics**. Does anyone know the whereabouts of this specimen today, or if a photograph is available?
- *(I)* This rather complex title is from Perkins' first British Patent dated October 11, 1819 obtained while he was in residence at No. 29 Austin Friars, London. It may have been filed to obtain British protection for all of the various concepts used in the manufacture of improved "forgery proof" bank notes that he hoped to produce for the Bank of England, a quest in which he failed. Following this failure Perkins' firm immediately went to work producing improved fire engine pumps and related industrial products, an endeavor so successful that the Society of Arts, in London, during 1820 and 1821 conferred on Perkins three gold medals and two silver medals in recognition of his inventive talents. These medals are illustrated on Plate XXI (facing page 92) in "Bathe".
- *(J)* A complete list of Perkins' patents is presented on pages 200 and 201 in "Bathe". He received a total of twenty-one American patents and nineteen British patents. In addition to those numismatically related items already enumerated, Perkins patents included such diverse products as Nails, Pumps, Morocco Leather processes, Fire Engines, Valves, Water Mills, Spoons, Bank Vault Locks, Watermarking Paper processes, Screw Propellers, Steam Boilers and Sealed Water Tubes, Steam Gun, Double Paddle Wheels, Brewing Apparatus, Central Heating devices, improvements to Bedsteads and Sofas, and Ice Making Machines.
- *(K)* Auctions by Bowers and Merena, Inc.; P.O.Box 1224; Wolfeboro, NH 03894. The paperback and continuous tone photographic editions of the Taylor catalog are fully subscribed and sold out; however, a limited number of hardbound (halftone) copies are still available, as of this writing, for \$65.00 each and can be ordered directly from Bowers & Merena.
- *(L)* Excerpts from a paper "First Steam Coinage" presented by Raymond H. Williamson at the Educational Forum the evening of May 9, 1986 during the Early American Coppers Club 1986 convention in Arlington, VA.

RARITY VALUES of MASSACHUSETTS COPPER COINS

• Michael Packard -- Fairfax, VA •

(TN-112)

1787 Half Cents
Variety Rarity Diecutter

1-D	5-	JC
2-A	5	JC
3-A	5+	JC
4-B	6	JC
4-C	3-	JC
4-D*	7+	JC
5-A	3+	JC
6-A	6+	JC
6-D	6	JC

1788 Half Cents
Variety Rarity Diecutter

1-A	6	JP
1-B	3-	JP

1788 Cents
Variety Rarity Diecutter

1-D	3	JP
2-B	4-	JP
3-A	4+	JP
3-E	3+	JP
4-G	5+	JP
5-H	Unknown	JC?
6-N	3+	JC
7-M	5	JC
8-C	3	JP
9-M	6+	JC
10-L	3-	JC
11-C	5	JP
11-E	4+	JP
11-F	5	JP
11-G*	Unknown	JP
12-H	8	JC
12-I	4-	JC
12-K	6+	JC
12-M	3	JC
12-O*	8	JC
13-I	8	JC
13-N	4-	JC
14-J	8	CC
15-M*	5	JC
16-M*	5+	JC
17-I*	7	JC

1787 Cents
Variety Rarity Diecutter

1-B	8	CC
2a-F	6+	JC
2b-A	3-	JC
2b-C	5	JC
2b-E	5	JC
2b-G*	7+	JC
3-G	3	JC
4-C	5	JC
4-D	4-	JC
4-J*	8	JC
5-I	7+	CC
6-G	4	JC
7-H	7	CC
8-G*	7	JC

NOTES: * - Unknown to Ryder
 CC - Contemporary Counterfeit
 JC - Joseph Callender
 JP - Jacob Perkins
 Unknown - No specimen
 currently known.

Rarity Scale Number Estimated
in Existence

8	1-3
7+	4-6
7	7-9
7-	10-12
6+	13-18
6	19-24
6-	25-30
5+	31-45

Rarity Scale Number Estimated
in Existence

5	46-60
5-	61-75
4+	76-115
4	116-160
4-	161-200
3+	201-500
3	501-950
3-	951-1250

A "QUANTITY ANALYSIS" of MASSACHUSETTS CENTS & HALF CENTS (TN-113)

● ● by J. C. Spilman

This analysis is designed to determine the total quantity of copper coins produced by the the Massachusetts mint and the number produced from the dies of each of the die sinkers, Joseph Callender and Jacob Perkins. It assumes, first, that the extant quantity of Massachusetts copper coins by year and type, i.e. cents and half-cents, is proportional to the original quantities of these coins, and secondly, that the rarity values developed by Michael Packard - while only estimates based on recent surveys - are reasonably accurate in a relative sense, one to another. An exact \$3493.67 valuation for the product of the Massachusetts mint is calculated from the chart in Crosby (center of page 269); for simplicity in this illustration we have rounded the amount to \$3500.00. A summary chart is presented for each of two types of calculations, a ROUNDED method and an ACTUAL method.

The quantity ratios were developed by assigning the highest estimated existence number in the rarity range to each die variety and then adding them together for the specific categories. The ratios given below are rounded values which are used in this paper to simplify the calculations and render them more understandable to the non-mathamatician. Actual values have been calculated by means of an AppleWorks computer spreadsheet; copies of the full three page spreadsheet printout or the computer program on disk are available from ye Editor at CNL. The final actual values differ by only 0.7% from the rounded values.

By inspection of the totals by catagory of the estimated quantity numbers presented in Michael Packard's rarity chart, it can be seen that:

- (1) The ratio of 1787 half cents to 1788 half cents is 1.6:1
- (2) The ratio of 1787 cents to 1787 half cents is 1.4:1
- (3) The ratio of 1788 cents to 1788 half cents is 5.0:1
- (4) The ratio of 1788 cents to 1787 cents is 2.3:1
- (5) The ratio of Callender to Perkins for 1788 cents is 1.1:1
- (6) The ratio of all cents to all half cents is 3.0:1
which means that 1/7 of the total dollar value
was in half cents.

- (7) Therefore: $\$3500.00 \times 1/7 = 100,000$ half cents,
and $\$3500.00 \times 6/7 = 300,000$ cents,
for a total of 400,000 coins

- (8) Utilizing the ratios established above,
1787 half cents = 61,538
1788 half cents = 38,462 Total = 100,000 half cents

1787 cents = 90,909
1788 cents = 209,091 Total = 300,000 cents

(9) All 1787 cents are attributed to Callender, and all 1787 half-cents are attributed to Callender.

(10) All 1788 half-cents are attributed to Perkins.

(11) Therefore, utilizing ratio (5) above we have:

Callender 1788 cents =	109,524	
Perkins 1788 cents =	99,567	Total = 209,091

(12) Thus approximate values using the ROUNDED ratios and dollars are:

	Callender	Perkins	
1787 half cents	61,538	-0-	
1787 cents	90,909	-0-	
1788 half cents	-0-	38,462	
1788 cents	109,524	99,567	
TOTAL COINS	261,971	138,029	SUM = 400,000
DOLLAR VALUE	\$2312.02	\$1187.98	SUM = \$3500.00
COINAGE %	65.492%	34.507%	

(13) The ACTUAL values as worked out by the computer are:

	Callender	Perkins	
1787 half cents	65,179	-0-	
1787 cents	90,402	-0-	
1788 half cents	-0-	41,489	
1788 cents	108,086	97,535	
TOTAL COINS	263,685	139,024	SUM = 402,709
DOLLAR VALUE	\$2,310.87	\$1,182.79	SUM = \$3,493.67
COINAGE %	65.547%	34.522%	

(14) Between these two methods there is a difference of only 2,709 total coins which is about 0.7% and is considered negligible. In both cases it can be seen that Perkins' dies produced slightly more than one-third of the total coinage.

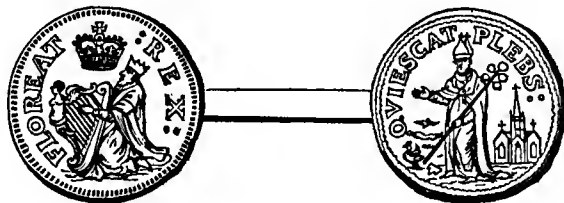
(15) "Well, we shall see; time proves all things"

(16) Any CNL Patrons who have not already assisted Michael Packard by advising him of their Massachusetts cent and half cent holdings are urged to do so by sending a listing to ye Editor. Please include die variety, grade estimate, provenance and weight in grains if available. It is important that we have as many specimens as possible in the tabulation. At best the rarity values are only estimates, but the more data available the more accurate the rarity estimates and this analysis become. All contributors will remain confidential.

The Saint Patrick Copper Token Coinage A Re-evaluation of the Evidence

(TN-114)

● ● from Michael J. Hodder; Wolfeboro, New Hampshire



Very little is known with absolute certainty about the St. Patrick copper tokens. They are known to have circulated in the Isle of Man before June 24, 1679, when they were demonetized by an Act of the Tynwald of that date. Three years later, on May 8, 1682, the General Free Assembly of West Jersey authorized Mark Newby (or Newbie—orthography being vital at the time) to circulate them in New Jersey at one halfpenny value, on surety from Newby that he would exchange them for "pay equivalent" on demand. No more than 5 shillings of the coppers were required to be accepted in any one payment. On Newby's death, in 1683, 30 pounds sterling value of the coppers were held against his estate, for redemption according to the terms of the Act of the year before.

Apart from these documented facts, most other statements about the origins and circulation of the St. Patrick coppers printed in American sources are inferential or hypothetical. It has been suggested that they were struck in the Tower Mint, London, in the late 1640s, from dies or punches by Nicholas Briot, and that the mintage was hidden after 1649 by a royalist Catholic faction loyal to Charles I and the fallen monarchy. Another writer has suggested that they were struck circa 1645 for the Earl of Glamorgan, to provide pay for royalist troops during the siege of Chester. Dr. Aquila Smith (1854) suggested that the coppers were originally struck in Ireland after the Restoration, circa 1660–1680, that they circulated in Ireland during this period, and that Mark Newby bought up a large part of the mintage in Dublin when he emigrated to America. As we shall see, this latter suggestion is accurate.

The St. Patrick coppers are known in two sizes. The larger piece, with observed weights ranging from about 122 to 150 grains, was illustrated by Dinely (1681), who called it a "...halfpenny issued for the ready change of this nation [ie, Ireland]." This may be the copper referred to in the Act of May 8, 1682. Observed weights of royal halfpennies of Charles II's reign range from 154 to 187 grains. Given the lower rating of Irish versus English coppers of the same denomination, it would not be unfair to call the larger St. Patrick copper coins Irish halfpennies. The smaller piece has been called a farthing; this denomination was not referred to in the West Jersey Act of May 8, 1682. Observed weights of the St. Patrick farthing range from 83 to 105 grains, a close equivalent to the weight range of Charles II's royal farthings, of 76 to 103 grains.

The iconography of the obverse and reverse types provides a first clue to the true origin of the coinage. On both the farthing and halfpenny coppers

the obverse shows a kneeling royal figure wearing robes edged in ermine. He plays a harp, and above him is a crown of vaguely imperial style. The figure is clearly an allusion to the biblical King David, and its iconography is solidly in the mainstream of the European canon. A very similar treatment can be seen on the 1641 ten ducat medal of Nuremburg, from dies by C. Maler, for example; and later on the 1682 psalmenpfennig of the Swiss city of Brugg, which continued the type through the third quarter of the 18th century. Much has been made of the likeness of the kneeling figure on the St. Patrick tokens to portraits of Charles I, but as both the Nuremburg portugaloser and the Brugg psalmenpfennige share identical portraits, details of the flooring on which the king kneels, and style of robes he wears, with the St. Patrick tokens' obverse iconography, it seems likely that they all derive from a common prototype. The message of the obverse is one of non-specific royalist sentiments clothed in quasi-religious symbolism redolent of Caroline divine right theory.

The reverses of both tokens feature a standing figure of St. Patrick, wearing an episcopal mitre. In its major outlines the type is identical to that appearing on Richard Greenwood's farthing token, issued in Dublin circa 1653-1679 (most likely circa 1676-1679). It is unknown whether Greenwood's token pre-dated the St. Patrick tokens, or vice versa, but archaeological evidence suggests that Greenwood's design may have been the prototype. On the St. Patrick halfpenny token the Saint holds a shamrock, symbolic of the Trinity; bears a crozier, the symbol of the bishop's pastoral care; and stands beneath the legend ECCE GREX ("Behold the flock"); all of which point to his spiritual role as bishop, shepherd of his flock. On the farthing token St. Patrick holds a metropolitan cross; points to the beginning of the legend QVIESCAT PLEBS ("Let the people be quieted"); and replacing the arms of Dublin appearing to his right on the halfpenny is a cathedral church on the farthing, the residence of a metropolitan; all of which point to the Saint's temporal role.

The iconographical evidence of the reverse type, in the figure of St. Patrick, points to an Irish origin for the entire St. Patrick token issue. The halfpenny token bears the arms of Dublin, three castles, below and to the right of the Saint. The similarity to a Dublin token of 1676-1679 further reinforces an Irish origin. The earliest authors mentioning the issue, Dinely in 1681 and Evelyn in 1697, both ascribed them to Ireland. In 1724 they were still current for halfpence and farthings among the common folk, and in 1726 Leake believed they had an Irish origin.

A terminus post quem has lately been established for the issue, one roughly contemporaneous with Greenwood's farthing token. On March 24, 1675 the former royal yacht Mary, impressed into service with the navy, left Dublin for Chester. In the early hours of March 25 she foundered off Anglesey and sank, carrying with her the Irish Earl of Meath. Between 1971 and 1976 the wreck was discovered and properly excavated. Among the artifacts recovered were 273 silver and copper coins, one of which was a Saint Patrick farthing token. The farthing token, then, must have been struck prior to March 25, 1675; by extension based on types the halfpenny was probably struck prior to that date, as well.

There is still no fixed terminus ante quem for the issue, although its similarity on the reverse to Greenwood's token, certainly struck after 1653 and probably after 1676, suggests one of circa 1653-1676, the most

energetic period in the 17th century for the manufacture of private (ie, not royally-authorized) tokens in Ireland. The Mary left from Dublin, the arms of Dublin appear on the Saint Patrick halfpenny, and Greenwood's token was a Dublin issue; these observations point to that city as the place of issue of the Saint Patrick tokens.

Almost all specimens of both denominations seen bear milled edges and a brass splash over the crown King David gazes at on the obverse. The farthing is occasionally found struck in silver (two varieties: with nimbus around St. Patrick's head, Rarity-7; without nimbus, low Rarity-7). A unique specimen struck in gold is known, pedigreed to the early 19th century British collector Philip Rashleigh (earliest public sale by Sotheby, Wilkinson & Hodge in 1909). The halfpenny is also known in silver, high Rarity-7. The existence of strikes in silver and gold is unusual in a privately manufactured token coinage. The presence of milling on a copper token coinage is highly unusual: the expense involved in this extra manufacturing stage would have reduced the profit on the coinage and was unnecessary except to discourage clipping and shaving. The brass splashes deliberately inserted into the flans at the time of striking are reminiscent of the brass inserts seen on royal farthings of Charles I's reign, where they served as anti-counterfeiting measures, making duplication more difficult than otherwise.

Modern Irish numismatic scholarship inclines towards the belief that the Saint Patrick token issue was struck circa 1674-1675 in Dublin, and that they had some as yet unclear official sanction. It is now thought that the tokens may represent a coinage scheme initiated by Arthur, Earl of Essex, Lord Lieutenant of Ireland 1672-1677. The copper's milled edges, brass splashes, and strikes known in silver and gold all strongly suggest a semi-official status for the Saint Patrick tokens.

There are many unanswered questions still remaining about the tokens, however. The Act of May 8, 1682 specifically authorized coppers to pass as halfpennies. We know that the farthing tokens were of comparable weight to royal farthings, and that the halfpenny tokens would have corresponded to an Irish rating but not to a royal, English, one. It could be that Newby bought up halfpennies because they were underweight compared to their farthing cousins. However, fewer than ten die combinations are known of the halfpenny token, while well over 80 different dies struck the farthing token. Given the known double rating of English coppers in the early colonial economy, the West Jersey legislators may have actually been authorizing the farthing token in their Act, calling them halfpence because that was the value they were to bear.

The seemingly differing weight standards that appear on the two sizes of the Saint Patrick token also need explanation. The farthing corresponds to the standard for an English farthing, while the halfpenny could have passed in Ireland but would have met resistance in England. If they were parts of a semi-official token coinage there should have been only one fundamental weight standard employed.

The Latin legends on the tokens almost scan: ECCE REX QVIESCAT PLEBS, ECCE REX ECCE GREX. They would have been unintelligible to the "plebs" for whom they were intended and could not have borne a political message for the masses. They have the ring of a college political song, and are certainly a clue to the dating of the issue. if only their origin could be found.

Letters LETTERS LETTERS Letters**Comments on TN-111 -- Gilfoil's Coppers****● ● from Eric P. Newman; St.Louis, MO (TN-111A)**

The article by Gary A. Trudgen entitled "Gilfoil's Coppers" in CNL No.76 is an unusual and intriguing piece of research.

Your comment (ye Editor's) following the article as to dies being made to strike pieces leads me to comment. The so-called "blacksmith tokens" of Canada circulated as halfpence in the early nineteenth century and are very crude. Could one or more of those tokens have been made in New York during the 18th century and be the coins in question? Gilfoil was a blacksmith and might have made those same type of pieces. In the alternative, if we say the words "beat out" describe their appearance rather than the method of making them, a blacksmith would have been able to make sand cast coppers using halfpence coppers in circulation to make sand molds. He might have needed some instructions for either method, as Gary and you point out, Gilfoil received some help from another person. Cast halfpence were often made.

Archeological evidence could certainly spoil our speculations.

**● ● and -- from Gary A. Trudgen, (TN-111B)
author of "Gilfoil's Coppers"**

I'm pleased that my Gilfoil article has stirred some interest. I believe your editorial comment is an important deduction derived from the available information. I'll send Crown Point a copy of the issue and ask to examine all copper coins that they have found, or may find, through their archaeological diggings.

● ● from Edward R. Barnsley; Beach Haven, NJ (TN-111C)

The map of Fort Crown Point pleased me because I have carefully examined this site. My grenadier ancestor, Major Thomas Barnsley, was stationed there in the 1750's when he was with the British Army as an officer of the 60th or Royal American Regiment of foot.

● ● and more -- from ye Editor. (TN-111D)

It may be that Canadian Blacksmith Coppers (or Tokens) are unfamiliar to some CNL Patrons. These Blacksmiths were avidly collected by a few

American collectors around the turn of the century, but there was never a large group who became interested in this very difficult series. The standard reference on Blacksmiths authored by Howland Wood, and the only article indicating die interlocking, appeared in the April 1910 issue of "The Numismatist"; an earlier article in the May 1908 issue by Dr. Eugene G. Courteau served as an introduction to this group. The earliest article on these specimens appeared in the April 1885 issue of the American Journal of Numismatics where Canadian numismatist R. W. McLachlan described ten of these pieces; his was apparently the first attempt to describe these coins as a series, but he did not apply the term blacksmith to the specimens. Each of these articles is very difficult to obtain today.

The specimens seem to have acquired the "Canadian" designation simply because the majority were discovered in Canada and were assumed to be of Canadian origin. The derivation of the "Blacksmith" portion of the name is described in a June 10, 1910 letter from Mr. McLachlan to Mr. Farran Zerbe:

..."Previous to 1837, when the lack of specie caused copper change to be accepted in bulk, there lived in Montreal a blacksmith of dissipated habits. He prepared a die for himself and when he wished to have a 'good time' he struck two or three dollars in these coppers and thereby supplied himself with sufficient change with which to gratify his wishes." ...

..."This incident was related to me by my mother, who lived at the time, and remembered these coppers when they were first circulated, as well as the blacksmith story. In fact, the shop in which he worked when in working trim was well known to her." ...

..."The first numismatist to regularly speak of the blacksmith in his letters as well as in conversations, was Mr. John Dow but I am unable to fix the date when he first used it..."

..."My article inspired the idea, Mr. John Drew gave it currency and Mr. Lyman H. Low printed it."

As noted above by Mr. McLachlan, Mr. Lyman H. Low in a sale catalog of the Scott Stamp and Coin Company, June 26, 1894, first printed the name "Blacksmith" in reference to these coins. Mr. McLachlan's letter to Farran Zerbe is included in a limited edition 1910 reprint of 100 copies from The Numismatist of Wood's original article.

A more recent publication destined to become a modern prime reference for the Canadian Blacksmith Coppers is the Frederick B. Taylor

Collection auction sale catalog of March 26-28, 1987 from Auctions by Bowers and Merena, Inc. This catalog includes some 18 pages of Canadian Blacksmith Coppers from the collection of Warren Baker comprising 130 lots of blacksmith and related tokens catalogued by Michael Oppenheim of Montreal, Canada and includes an extensive history of the series. Dr. Oppenheim has been most helpful in the past by introducing ye Editor to the background on this series and by donating reference materials for the CNL Library and reference collection. See endnote *(K)* on page 1012 of this issue.

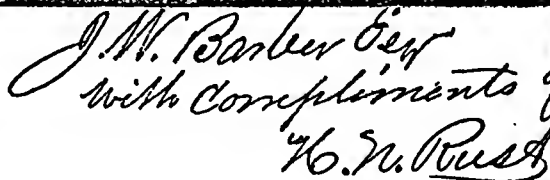
It would be interesting indeed if we should someday discover that American Blacksmith Coppers -- Gilfoil's Coppers -- have been included within the Canadian Blacksmith series. The term "Blacksmith" appears, today, -- at least to our Canadian friends -- to have become a generic description which applies to any poorly made and crude imitation of a British Regal Halfpence. Perhaps we should close with Jacob Perkins' favorite maxium, quoted earlier in this issue, "Time proves all things."

● ● **Another Note on Horatio N. Rust**
from Mike Ringo; Albany, NY

(RF-21F)

The following is a photocopy of an interesting handwritten presentation note which I located inside of the New York State Library's copy of Noah Phelps' work on the copper mines at Grandby, Connecticut. [A History of the Copper Mines and Newgate Prison, at Grandby, Conn.; Hartford: Press of Case, Tiffany & Burnham, 1845.] I have not been able to determine if J. W. Barber is the William Barber of the U. S. Mint, or if Rust ever lived in the Hartford area, but it would seem likely if he had anything to do with the Fugio ("New Haven") restrikes. Perhaps you or a reader can shed more light on the subject.

Editor's note: This certainly is the signature of ol' Horatio! I have forwarded a copy of the page to Raymond H. Willimason in Lynchburg, VA who continues to work on the history of Rust.



J.W. Barber Esq.
with Compliments
H.N. Rust

A

HISTORY

OF THE

More on the WOART Token
from Steven E. Saari; Ashby, MA

(TN-105A)

During the summer of 1986 at a local antique show I purchased what is either a very early reproduction or an original copy of "The Boston Directory for 1789." Listed among the W's was a John Woart doing business at The Sign of the Dragon on Union Street. Mr. Anton's discovery of the W. WOART Massachusetts Tradesman's Token described in TN-105 (CNL page 915) has always interested me, so I decided to spend some time in the reference room of our local library hoping to find additional information. I located several references to a Mr. Woart who apparently provided meals to the members of the city council as they had to vote approval of payment for these meals. These references were contained in the "Proceedings of the Council for 1789."

In a book entitled "A Report of the Record Commissioners of the City of Boston" containing the statistics of the U.S. Direct Tax of 1798 as assessed on Boston and the names of the inhabitants of Boston in 1790 as collected for the first national census I found the following entry for taxes:

John Whipple of Portsmouth, NH owner; Ebenezer Moulton and William Woart residents, brick and wooden dwelling; east on Cornhill; south on Mr. Belknap; north on John Brazier, kitchen & etc. 432 sq. ft.,
2 stories.

The rest of the building must have been empty at the time because just below the above entry was a description of the total property:

Land 2100 sq. ft.; house 880 sq. ft.; 3 stories,
32 windows; value \$5000.00.

In another volume which listed marriages in Boston from 1700 to 1800 I found the following entry: Married September 24, 1798,
William Woart to Mary Loring by Rev. Samuel Parker.

My luck and time ran out at this point. Maybe you can get a CNL Patron who lives in Boston to search this question further. I am curious as to what William Woart did for a living. Perhaps there are other William Woarts. I originally thought that John Woart, as listed in my directory, ran an inn, but he is not listed as an innholder or keeper, nor could I find him listed as a holder of a liquor license.

